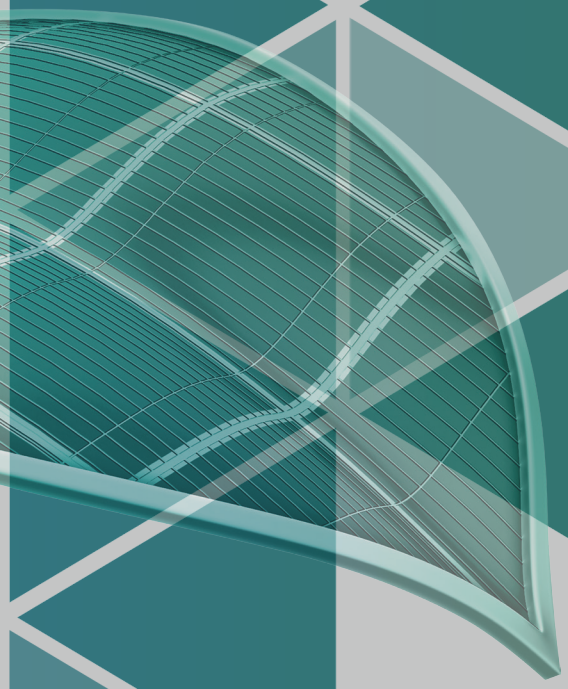
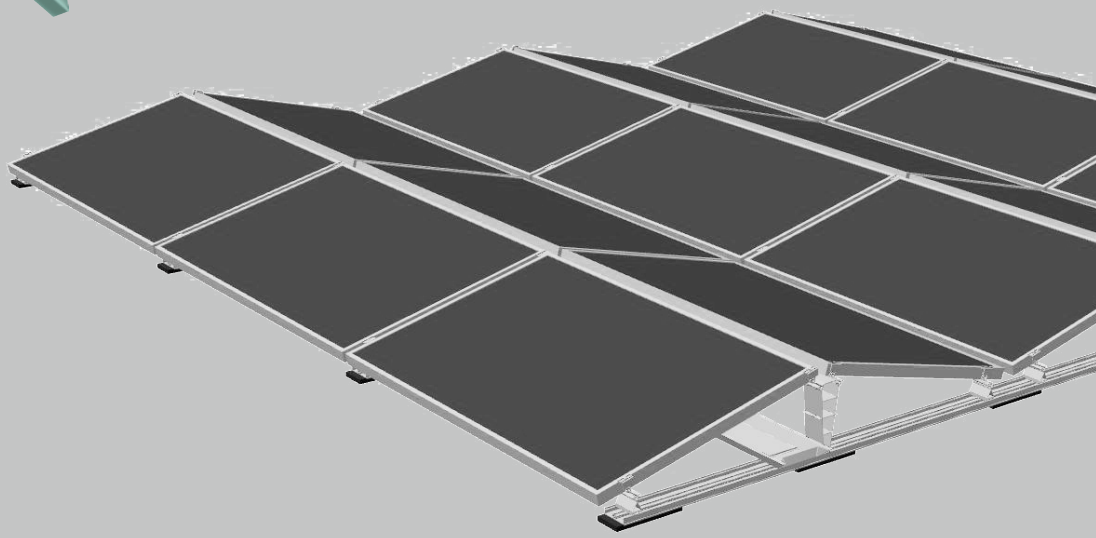
SCHLETTER
The Solar Mounting Group

FixGrid18-100

MOUNTING INSTRUCTIONS

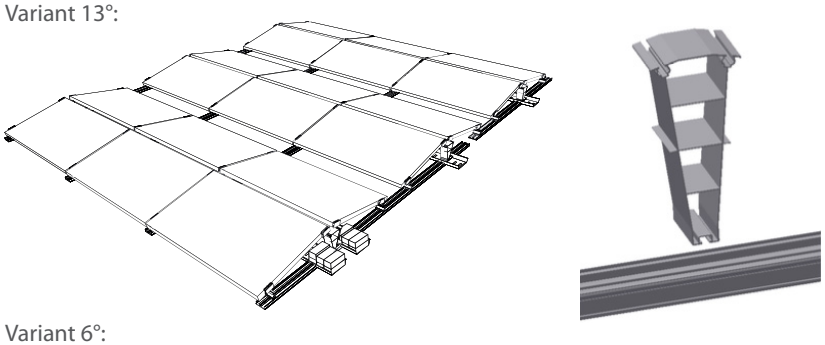




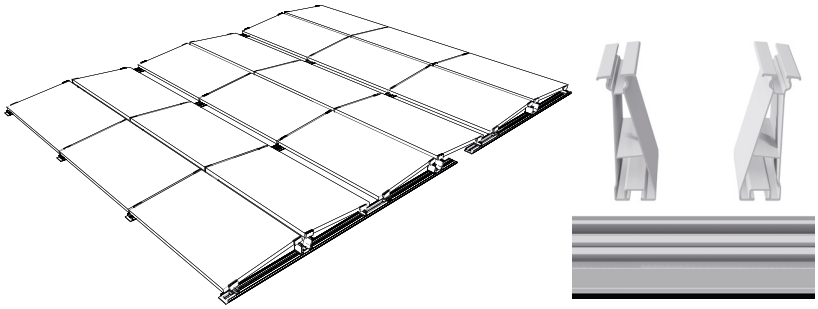
FixGrid100-18

Mounting instructions for double alignment (e.g., East-West):

Variant 13°:



Variant 6°:



Required tool

Measuring tape, screwdriver with Bit TX drive T40 (module mounting) and socket wrench insert with SW8 socket wrench (e.g., internal connector)

Further required documents

General mounting instructions - Mounting and project planning
Mounting instructions Module clamps Rapid 16
Product Sheet FixGrid18, FixGrid18 Kit

Tightening torques

Screw connections M8: 15 Nm
Exception: Self-drilling screws have to be screwed on in a stop-oriented manner

Safety information

The system is to be installed only with ballasting in accordance with static loads. You will receive these with the planning of your solar plant from the Schletter configurator

Risk of breakage! PV modules can be damaged if they are stepped on. Planning of the solar power system, installation and commissioning may only be performed by qualified personnel. Improper execution can cause damage to the system and endanger people.

Danger due to electric current! Installation and maintenance of the PV modules may only be performed by qualified personnel. Observe the safety regulations of the PV module manufacturer!

Risk of falling! There is a risk of falling when working on the roof and when climbing up and down. Is it imperative that the accident prevention regulations are observed and that suitable fall protection devices are used.

Risk of injury! People may be injured by falling objects. Before starting the installation work, block off the danger zone and warn people in the vicinity.

Mounting instructions

Ensure that the flat roof waterproofing is compatible with the mounting system. The roof drainage system has to be included in the planning of your solar plant.

In the case of very uneven roofs or roof waterproofing, compensatory measures may have to be taken in order to ensure a uniform introduction of the load.

Necessary distances to roof edges have to be maintained.
The maximum field size depends on the type of roof.
For foil roofs, it is max. 10 m; for concrete roofs, it can also be larger in individual cases.

In the case of roofs with substrate or gravel roofing, it has to be ensured that a sufficiently non-slip connection occurs.

Please check the existing pitch of the roof and whether the mounting system has to be secured against slipping.

The surface load is not permitted to exceed the residual load-bearing capacity of the building!

The partial surface pressure, which acts on the roof membrane and insulation under the base rails, is not allowed under any circumstances to exceed the maximum permissible surface pressure.
Current country-specific rules and regulations have to be observed.
Roof cleaning! In order to ensure that the base rails are supported across their entire surface, impurities such as moss, leaves, dirt, stones, etc. have to be removed.

If there is a lightning protection system involved, it is important to determine the extent to which integration by a certified lightning protection company is necessary. Whether or not the lightning protection requirements change as a result of the installation also has to be determined.

Due to static reasons, the installation of a single module row is not permitted!

Prior to installation, the roof has to be checked for damage of any kind, particularly water beading or damage to the roof membrane. These should be documented with photos in order to be able to counteract any recourse claims. The system has been developed for modules with a width of 950-1050 mm (standard module dimensions according to the current status). Other module dimensions on request and separate verification. Information about module clamping pursuant to the manufacturer has to be observed.

Use only original Schletter components!

Use the current mounting instructions! Accessible on our website: www.schletter-group.com in the solar section under **Downloads**

Defining the base rail lengths and distances between module supports

1

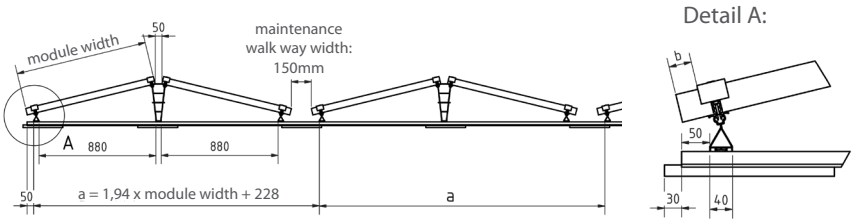
The length of the base rails depends on the selected module width, maintenance aisle width and the number of module rows.
The distance between "System Rail 18 at the bottom" and "System Rail 18 at the top" only depends upon the module inclination. The first support should be placed at least 50 mm from the front edge of the base rail. The module frames are always flush at the top with the Rapid 16 module clamps.

- The base rail length can be selected from the four standard lengths (2650, 4200, 6000, 6300 mm) and combined with each other. The base rails can be connected with the internal connector, Item No. 129078-000. The maximum permissible field size has to be observed!

Mounting distances

Mounting Distances a and c as well as the lower projection of Modules b and d result from the module width. The dimensions can be determined as follows.

Variant 13°

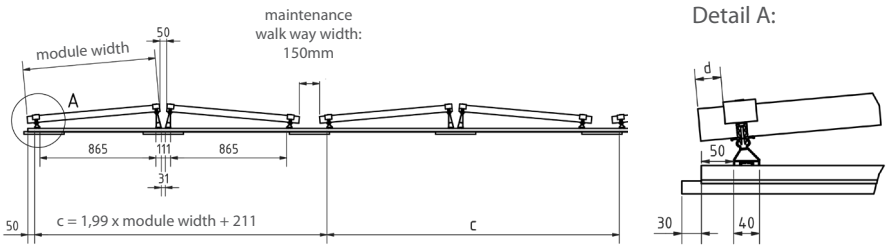


Distance a has to be adapted according to the width of the maintenance walk way.
The specification of the distances is based on the use of Rapid16 module clamps (module clamp length = 50mm).

b = module width - 950

maintenance walk way width

Variant 6°



Distance c has to be adapted according to the width of the maintenance walk way.
The specification of the distances is based on the use of Rapid16 module clamps (module clamp length = 50mm).

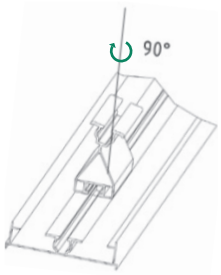
d = module width - 950

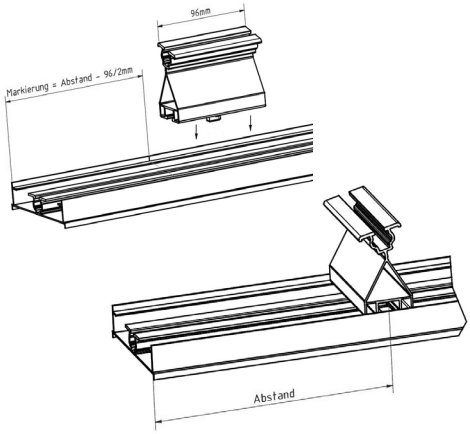
The mounting times can be optimized by pre-assembling a series of base rails next to each other on mounting frames with the module supports.

Mounting of the module support with pre-assembled screw-in connector on the base rail

2

- Marking for the mounting of the module support:
  Front edge of the module support = Distance - 96/2 mm
- Place the front edge of the support on the mark; pay attention to the direction of rotation!
- Turn clockwise by 90°.



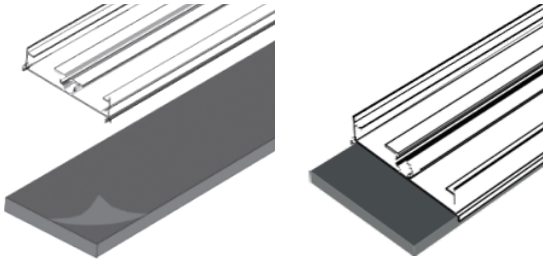


Observe suitable module and row distances for rail and module mounting.

Mounting of the surface protection mat

3

- After removing the protective film, glue the cut parts of the surface protection mat onto the base rails.
- Take into account a projection of the surface protection mat of at least 30 mm at the rail ends.

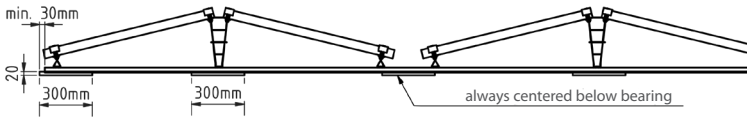


In the case of transversely flowing rainwater, the distance has to be dimensioned on the basis of the amount of precipitation on site.

The installation distances of the surface protection mats below the base rail result from the chosen installation variant.

Variant A

- Mount 20-mm-thick and 300-mm-long strips centrally under each support
- Load introduction on a small area (for low loads and/or solid subsoil)
- An additional surface protection mat should be positioned under joints of the base rails!
- If the roof water drains off transversely, an almost unhindered drainage is possible.



The permissible surface pressure of the roof has to be checked!

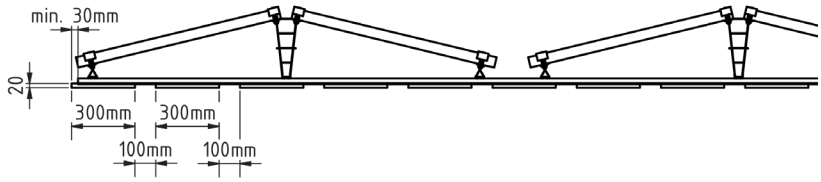
Sufficient drainage of rainwater has to be ensured!

Variant B

- Apply 20-mm-thick and 300-mm-long strips at a distance of 100 mm
- Load introduction on large area (for high loads and/or soft subsoil with low permissible surface pressure)
- Also suitable for transversely draining roof water

The permissible surface pressure of the roof has to be checked!

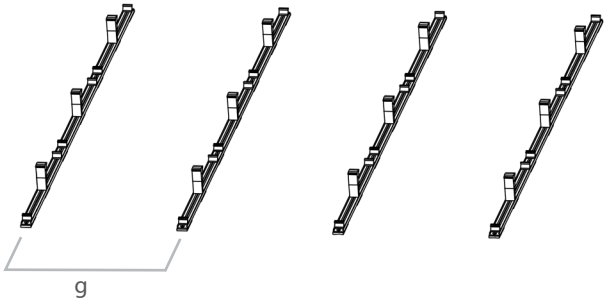
Sufficient drainage of rainwater has to be ensured!



ALIGNMENT OF THE BASE RAILS

4

- Align base rails parallel to each other; align the FixZ system rails 18 flush and at right angles to the base rails on the subsoil.
- Distance g = Module length + 23 mm



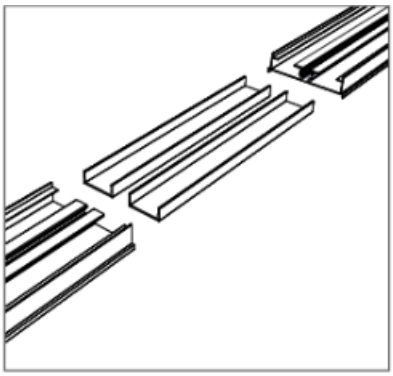
EXTENSION OF THE BASE RAILS

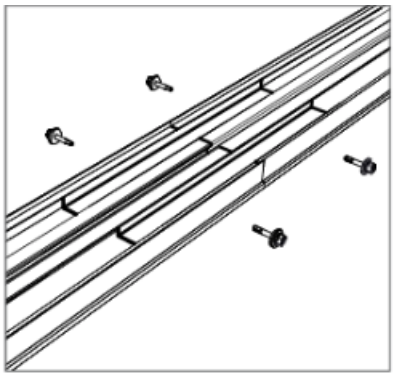
5

- Extend base rail as required.

To do so, insert the inner connector into two rails and fix each end with two self-drilling screws.

Tool: Screwdriver with plug-in attachment 8 mm

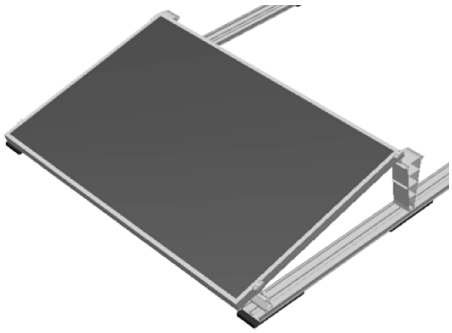




APPLY THE FIRST MODULE

6

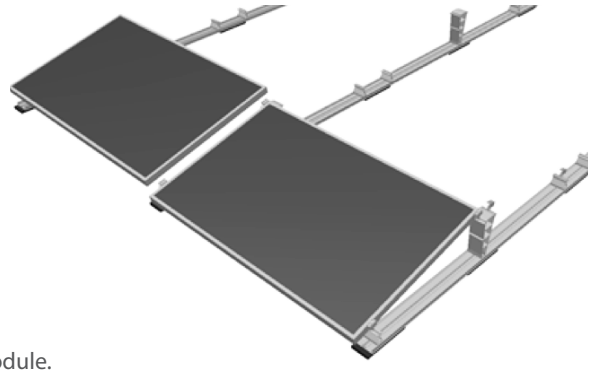
- Click Rapid 16 end clamps into place at the edge of the module field and position them. Also click the Rapid 16 middle clamp into place at a generous distance so that the module can be inserted between the clamps.
- Place the module on the FixZ System Rail 18 and align it with the upper edge using the pre-attached Rapid 16 clamps. Pay attention to the alignment of the module row.



INSTALL THE FIRST MODULE

7

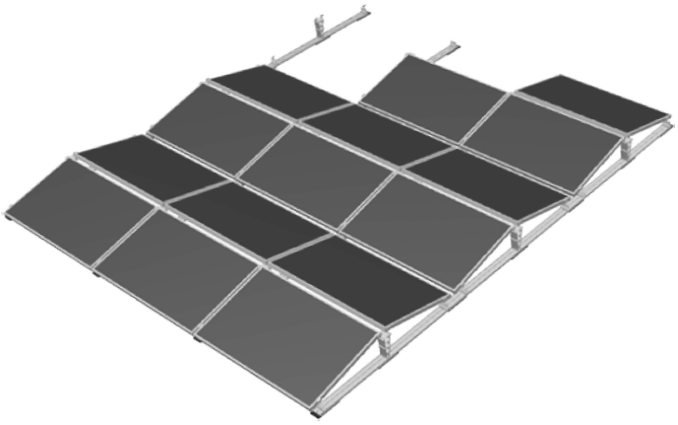
- Apply the Rapid 16 end clamps (at the top and at the bottom) to the module and tighten, Screws M8 (T40).
- Place the module center clamp on the module; do **not** tighten.
- Connect the module cable according to the plan.



INSTALL FIRST MODULE

8

- Apply the next module.
- Tighten the middle clamps (at the bottom and at the top) between the modules with Screws M8 (T40)
- Pre-assemble the other middle clamp on the free module side.
- Connect the module cable according to the plan.
- Repeat steps up to the last module in the row.

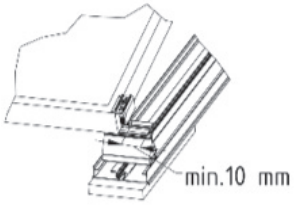


MOUNT THE LAST MODULE OF THE ROW

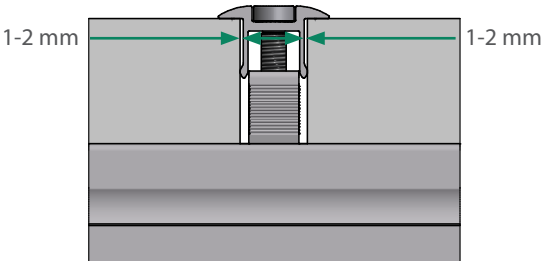
9

- Install the last module.
- Tighten the middle clamps (at the bottom and at the top) between the modules with Screws M8 (T40)
- Mount and tighten the end clamps on the free side of the module.
- Connect the module cable according to the plan.

Insert the end clamps at least 10 mm from the rail end



Note the module spacing for middle clamps

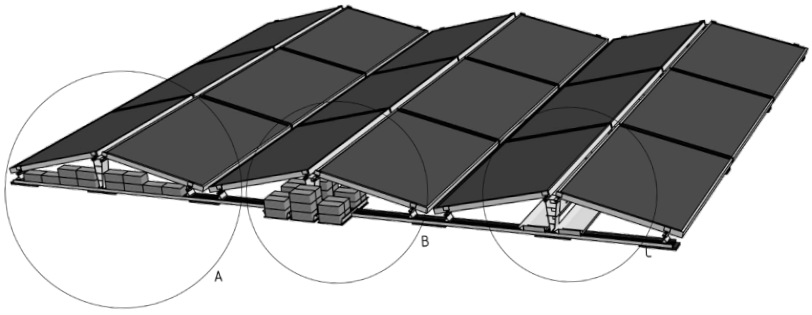


OBSTRUCT THE BALLAST

10

There are basically 3 ballasting options:

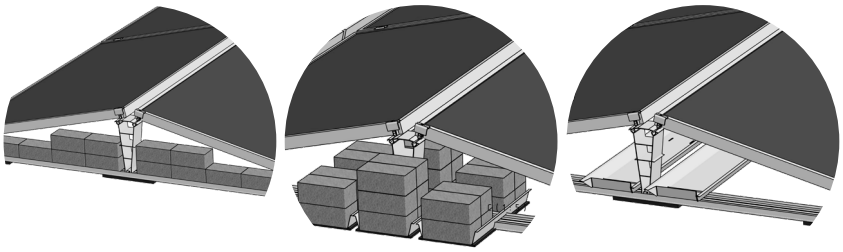
- Ballasting with 100-mm-wide concrete blocks on the base rails (see Detail A)
- Ballasting with additional trough (see Detail B)
- Ballasting with additional ballast shafts (see Detail C)
- Ballasting from the combination of the 3 possibilities



The information about ballasting can be obtained with the planning of your solar plant from the Schletter configurator.

Use fixing flaps to attach the parts of the surface protection mat to the additional trough.

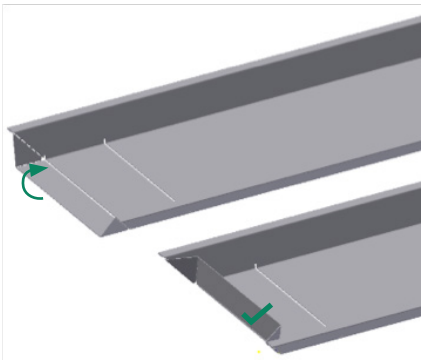
(Ballast is not included in the scope of delivery).



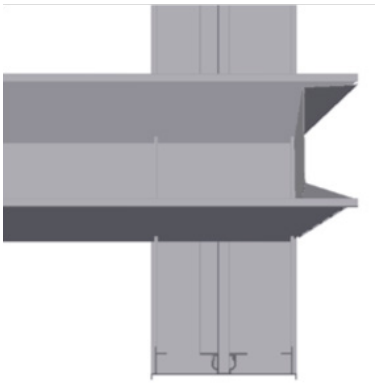
Detail A **Detail B** **Detail C**

LAY THE BALLAST WITH ADDITIONAL BALLAST TRAYS

If the ballast trays are filled with gravel, the gravel can be prevented from leaking at the row ends by folding up the tray ends.
To do so, the ends of the ballast trays have to be folded at the perforation.
The first ballast tray is laid from the right with the recesses and the upstand on the base rails.



All other trays are turned 180 degrees (recesses on the left) from right to left. The tray always lies with the side of the slots at the bottom and in the base rail with a positive fit.



At the last ballast tray, the end has to be unfolded again.

Further Information about our systems can be found on our website: www.schletter-group.com in the solar section under Downloads.

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